

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A wheel arrangement having a first support arrangement, a second support arrangement, a fixed framework member and a moveable support having a substrate contacting wheel, characterised in that said first and second support arrangements are moveable with respect to the fixed framework member, the first support arrangement and the second support arrangement are located substantially transversely to each other, and cooperatively interact with the fixed framework member whilst permitting the moveable support member to move with respect to the fixed framework member, so that movement of the first and second support arrangements permits the substrate contacting wheel to move with respect to the fixed framework member.
2. A wheel arrangement, characterised in that the arrangement includes a fixed member provided with a first pathway and with a second pathway, a mounting member or means provided with a wheel moveable with respect to the mounting means, said mounting means provided with a first travel means for movement along the first pathway of the fixed member, and a second travel means for movement along the second pathway of the fixed member, said mounting means and wheel being moveable as a unit with respect to the fixed member, wherein the first travel means and the second travel means are arranged to lie in two different planes so that movement of the first travel means along the first pathway and movement of the second travel means along the second pathway are in unison with each other, so as to facilitate movement of the mounting means with respect to the fixed member, thereby allowing the wheel to move with respect to the fixed member, whilst allowing the first and second travel means to remain in contact with the fixed member.
3. A wheel arrangement including:
an operating member moveable between a first

position and a second position;

a wheel carrying assembly moveable between a first position and a second position; and

5 carrying assembly, characterised in that movement of the operating member in one direction causes corresponding movement of the wheel carrying assembly and reinforcing member in a first direction so that the wheel carrying assembly adopts a first position, and movement of the 10 operating member in another direction causes corresponding movement of the wheel carrying assembly and the reinforcing member in a second direction to adopt a second position, whereby the reinforcing member limits the amount of movement in the first and second directions between the 15 first and second positions and determines the first and second positions whilst assisting in maintaining the wheel carrying assembly in the first and in the second positions, so that in one position the wheel arrangement contacts a substrate upon which a load borne by the wheel 20 assembly is supported, and in another position the wheel arrangement is not the sole support of the load on the substrate.

4. A wheel arrangement according to any preceding claim, characterised in that the operating member is an 25 operating lever.

5. A wheel arrangement according to any preceding claim, characterised in that the operating lever is fixedly connected to a rotating shaft.

6. A wheel arrangement according to any preceding 30 claim, characterised in that the operating lever rotates in a first direction to lower the wheel arrangement and rotates in a second direction to raise the wheel arrangement.

7. A wheel arrangement according to any preceding 35 claim, characterised in that the wheel carrying assembly includes a wheel carrying member to which the operating member is connected.

8. A wheel arrangement according to any preceding claim, characterised in that the wheel carrying member is a shaft, axle, pin or similar.
9. A wheel arrangement according to any preceding 5 claim, in which the wheel carrying assembly is a castor wheel assembly.
10. A wheel arrangement according to any preceding claim, characterised in that the first support arrangement includes a roller means and the second support arrangement 10 includes a roller means.
11. A wheel arrangement according to any preceding claim, characterised in that the roller means includes a roller wheel, roller bearings or similar allowing swivelling movement of the ground contacting wheel 15 assembly with respect to the remainder of the wheel carrying assembly.
12. A wheel arrangement according to any preceding claim, characterised in that the wheel carrying assembly is moveable between a first position in which the castor 20 wheel is in a relatively lowered position or an extended position, and a second position in which the castor wheel is in a relatively raised position or retracted position.
13. A wheel arrangement according to any preceding claim, characterised in that the reinforcing member is a 25 plate having a hinge member, preferably a tongue.
14. A wheel arrangement according to any preceding claim, characterised in that the wheel arrangement is provided with a main framework member which is fixedly connected at one side to the end of a lengthwise extending 30 member by suitable fastening means.
15. A wheel arrangement according to any preceding claim, characterised in that the wheel assembly is fixedly connected to the wheel carrying member.
16. A wheel arrangement according to any preceding 35 claim, characterised in that the fixed member is substantially U-shaped bracket or yoke fixedly connected to the wheel carrying member for movement therewith to

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move the wheel assembly between two different configurations.

17. A wheel arrangement according to any preceding claim, characterised in that there is a U-shaped bracket 5 or yoke including a deck and two downwardly depending side support arms or side skirts.

18. A wheel arrangement according to any preceding claim, characterised in that the wheel arrangement further includes side support arms or side skirts which are 10 connected to the wheel carrying member.

19. A wheel arrangement according to any preceding claim, characterised in that the deck is provided with a central aperture.

20. A wheel arrangement according to any preceding 15 claim, characterised in that the central aperture is provided with a flanged edge or rebated edge around the circumference of the aperture.

21. A wheel arrangement according to any preceding claim, characterised in that the flanged or rebated edge 20 is the first pathway which forms a substantially circular track or race for receiving a runner or similar.

22. A wheel arrangement according to any preceding claim, characterised in that the circular aperture of the deck is provided with an undersurface adjacent the 25 circumference of the aperture which forms the second pathway.

23. A wheel arrangement according to any preceding claim, characterised in that the second pathway is a race or track for receiving a traveller or runner, preferably a 30 different traveller or runner than in contact with the first pathway.

24. A wheel arrangement according to any preceding claim, characterised in that the mounting member or means is a substantially U-shaped bracket or yoke having a web 35 portion and two downwardly depending side arms or support arms.

25. A wheel arrangement according to any preceding

claim, characterised in that the side arms are substantially triangular in shape.

26. A wheel arrangement according to any preceding claim, characterised in that the first travel means 5 includes roller means, such as roller wheels, roller bearings, ball bearings or similar.

27. A wheel arrangement according to any preceding claim, characterised in that the first support arrangement is one or more roller wheels, said roller wheel or wheels 10 being mounted substantially horizontally.

28. A wheel arrangement according to any preceding claim, characterised in that the roller wheels of the first support arrangement rotate within the flanged rebate around the circumference of the aperture in the deck.

15 29. A wheel arrangement according to any preceding claim, characterised in that there are seven roller wheels forming the first support arrangement.

30. A wheel arrangement according to any preceding claim, characterised in that the second travel means 20 includes roller means, such as roller wheels, roller bearings, ball bearings or similar which are mounted substantially vertical for travelling around the edge of the aperture along the underside of the deck.

31. A wheel arrangement according to any preceding 25 claim, characterised in that there are from two to seven individual roller wheels forming the second support arrangement.

32. A wheel arrangement according to any preceding claim, characterised in that the mounting means is 30 provided with a cover for releasably securing to the web of the U-shaped bracket forming the mounting means.

33. A wheel arrangement according to any preceding claim, characterised in that the cover plate is located on one side of the deck of the fixed member, preferably the 35 upper side in use, whilst the web of the mounting means is located at the other side of the deck, preferably the underside of the deck.

34. A wheel arrangement according to any preceding claim, in which the cover plate is clamped to the mounting means to locate and maintain the two sets of roller wheels in the respective tracks so as to allow the mounting means and wheels to rotate or swivel with respect to the fixed member, thereby permitting 360° movement of the substrate contacting wheel.

5 35. A wheel arrangement according to any preceding claim, characterised in that the position of the first set of roller wheels substantially corresponds to the position of the second set of roller wheels.

10 36. A wheel arrangement according to any preceding claim, characterised in that the fasteners used to fasten the first set of roller wheels is also used to fasten the cover plate.

15 37. A wheel arrangement according to any preceding claim, characterised in that the mounting member includes a tubular member having a space or gap in the side wall.

20 38. A wheel arrangement according to any preceding claim, characterised in that the mounting member is a ring from which a section of the side wall has been removed.

25 39. A wheel arrangement according to any preceding claim, characterised in that the wheel rotates at least partially in the gap or space so as to reduce the height of the wheel arrangement.

30 40. A wheel arrangement according to any preceding claim, characterised in that the majority of the mounting means is located below the top of the wheel preferably, the roller wheels are located below the top of the wheel to result in a more compact wheel arrangement.

41. A hoist having a wheel arrangement according to any one of the preceding claims.

42. A hoist according to any preceding claim, characterised in that there are four substantially identical wheel arrangements located at or towards the four corners of the hoist.

35 43. A wheel arrangement, substantially as

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hereinbefore described with reference to the accompanying drawings.

44. A hoist having one or more wheel arrangements, substantially as hereinbefore described with reference to
5 the accompanying drawings.

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